

Geometry of Kicker

C.Y. Tan

20 Mar 2007

Geometry

Pipe ID (in)	Zodd (Ω)	Zeven (Ω)	Plate Angle (°)	Dist. to Wall (in)
2	49.1	56.5	83	0.3
2.5	49.4	73	120	0.5
3	49.3	91	135	0.8

Calculation is for infinitely long kicker

For $Z_{even} = 73\Omega$ and $R=50\Omega$, next reflection
is 27dB lower, so should be OK.

Basically because of 2 reflections:

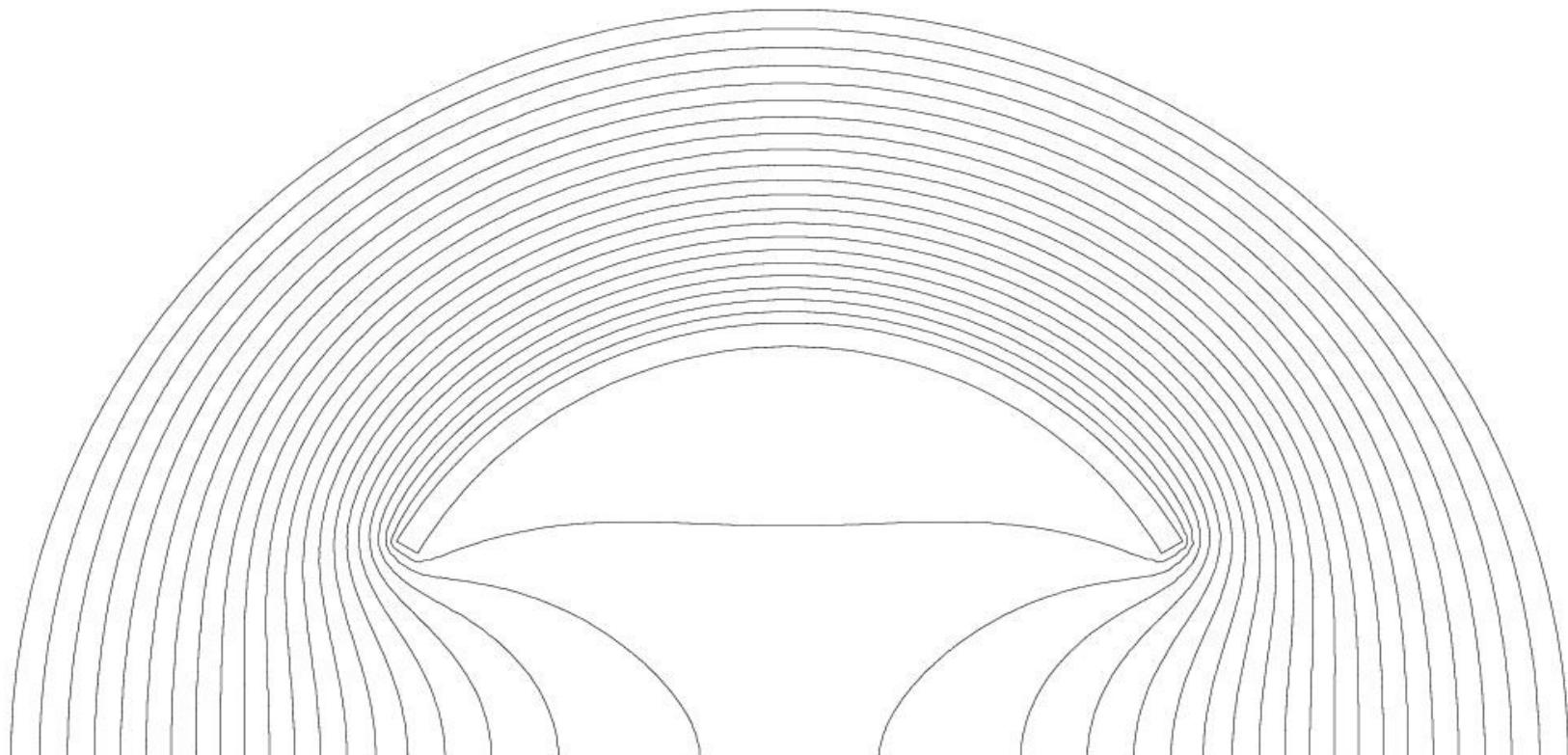
$$\frac{V_m}{V_{m-1}} = \left(\frac{1 - R/Z_0}{1 + R/Z_0} \right)^2$$

Distance between plates 35mm

Calculation Using Poisson Sum Mode

NML Dark Current Kicker Cycle = 200

Equipotential Lines shown



Calculation Using Poisson Difference Mode

NML Dark Current Kicker Cycle = 170

Equipotential Lines shown

